

# BEST AVAILABLE COPY

Docket 41473/124196

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re U.S. Patent Application of Ross A. CAPUTO, Robert R. REICH, Jr., Robert J. THRASH, Jimmy FISHER, Davoud KHORZAD, and Thomas F. CULLEN		) ) )	JAN 0 7 2003 TC 1700			
Serial	No.: 09/901,389	) Examiner:	To Be Assigned			
Filed: July 9, 2001		) ) Group: )	1764			
For:	APPARATUS FOR TESTING STERLIZATION METHODS AND MATERIALS	) ) )				

## FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

Applicants wish to make of record the following documents (clean copies and one Form PTO-1449 listing them are enclosed). Neither this First Supplemental Information

Disclosure Statement nor its filing constitutes either an admission that any of the documents is prior art or a representation that a search has been made.

#### **U.S. Patent Documents**

Document No.	<u>Date</u>	<u>Inventor</u>
141. 4,742,667	5/10/88	Muller et al.
142. 5,078,976	1/7/92	Shibauchi et al.
143. 5,178,841	1/12/93	Vokins et al.
144. 5,633,424	5/27/97	Graves et al.

#### **Other Documents**

- 11. International Search Report for PCT Application No. PCT/US02/21500, mailed November 5, 2002 ("Production Of Hydrogen Peroxide Vapor-Air Mixtures").
- 12. International Search Report for PCT Application No. PCT/US02/21501, mailed November 5, 2002 ("Apparatus For Testing Sterilization Methods And Materials").

Comments concerning the foregoing documents are set forth below.

# **U.S. Patent Documents**

141. U.S. Patent No. 4,742,667 concerns an apparatus for packaging a product in containers, which includes a sterilization station and a conveyor for intermittently conveying containers to the sterilization station. A vaporizing nozzle communicates with a reservoir of liquid disinfectant containing hydrogen peroxide and a source of compressed air. The nozzle is intermittently opened and closed whereby the compressed air vaporizes the disinfectant and a mixture of liquid disinfectant in fine droplets and compressed air is ejected when the nozzle is open. A tube is connected with its intake end at the nozzle and is disposed parallel to the jet emitted from the nozzle. A heater on the tube heats the inner surface of the tube to a temperature that is sufficiently high to rapidly evaporate the disinfectant in the mixture. As a result a mixed flow of compressed air and evaporated disinfectant leaves the output end of the tube and enters the container in the sterilization station. (Abstract)

dropwise flowing a disinfectant liquid on a heating unit so as to provide a uniform disinfection gas on a surface of a material to be sterilized, characterized in that at least one supply port for supplying heated carrier gas at a high temperature is provided in a vaporization chamber for the disinfectant liquid. A vaporization part is provided with a plurality of cavities on an upper surface thereof and at least one dropping nozzle is provided above each cavity, wherein the disinfection gas carried by the heated carrier gas is applied on a surface of a material to be sterilized through a droplet splash removing apparatus. The droplet splash removing apparatus has a series of vertically, spaced-apart shield plates with staggered holes therein through which the vaporized disinfectant and carrier gas pass and entrained droplets of disinfectant liquid are removed. (Abstract)

143. U.S. Patent No. 5,178,841 concerns an apparatus for sterilizing containers, such as beakers, on a line of an aseptic food packaging machine. The apparatus has a sintered stainless steel tube (6) surrounded by an outer tube (7) which has a plurality of outlets (10). A source of hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) (1) is vaporized by heated air (4) and passed into the sintered tube (6), from where it permeates to the outer tube (7) and via the outlets (10) to respective containers (18), to sterilize the containers. The combination of the sintered tube and outer tube serves to evenly distribute the H<sub>2</sub>O<sub>2</sub> vapor to evenly sterilize a row or [sic] beakers, indexed through the apparatus. (Abstract)

144. U.S. Patent No. 5,633,424 provides methods and an apparatus for sterilizing articles. According to one exemplary method, at least one article is placed into a chamber and a vacuum is applied to the chamber. After the pressure within the chamber is sufficiently reduced, water vapor is introduced into the chamber and electromagnetic radiation energy is applied to

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produce a plasma. In one particularly preferable aspect, the chamber is allowed to reach a static condition before the water vapor is introduced. In this way, the water vapor is able to equally distribute itself throughout the volume of the chamber so that an equally distributed plasma can be produced upon application of the electromagnetic radiation energy. (Abstract)

## **Other Documents**

- 11. International Search Report for PCT Application No. PCT/US02/21500, mailed November 5, 2002 ("Production Of Hydrogen Peroxide Vapor-Air Mixtures"). This PCT application corresponds to U.S. Patent Application Serial No. 09/901,337, filed July 9, 2001, which U.S. patent application was filed concurrently with the present application and which is referenced in the present application, e.g., on pages 16, line 1 et seq., page 18, line 27 et seq., and page 22, line 4. The search report for PCT Application No. PCT/US02/21500 lists three documents: (a) U.S. Patent No. 4,742,667, (b) U.S. Patent No. 5,078,976, and (c) U.S. Patent No. 5,178,841. Comments concerning those three documents (i.e., items (a) through (c)) are set forth above.
- 12. International Search Report for PCT Application No. PCT/US02/21501, mailed November 5, 2002. The PCT application corresponds to the present U.S. Patent Application Serial No. 09/901,389. There are five documents listed in the Search Report:

  (a) U.S. Patent No. 5,492,672, which is U.S. Patent Document No. 67 of the Information Disclosure Statement filed concurrently with U.S. Patent Application Serial No. 09/901,389 and which is listed as a "Y" document in the Search Report; (b) U.S. Patent No. 5,620,656, which is U.S. Patent Document No. 83 of the Information Disclosure Statement filed concurrently with U.S. Patent Application Serial No. 09/901,389 and which is listed as a "Y" document in the Search Report; (c) U.S. Patent No. 5,792,435, which is U.S. Patent Document No. 97 of the

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Information Disclosure Statement filed concurrently with U.S. Patent Application Serial No. 09/901,389 and which is listed as a "Y" document in the Search Report; (d) U.S. Patent No. 5,872,004, which is U.S. Patent Document No. 106 of the Information Disclosure Statement filed concurrently with U.S. Patent Application Serial No. 09/901,389 and which is listed as a "Y" document in the Search Report; and (e) U.S. Patent No. 5,633,424, which is U.S. Patent Document No. 144 of this First Supplemental Information Disclosure Statement and which is listed as a "Y" document in the Search Report. The relevance of the first four of these documents (i.e., items (a) through (d)) is set forth in the application. Comments concerning the fifth document (item (e)) are set forth above.

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The Examiner is asked to review all of the foregoing documents and independently assess their relevance before issuance of the first action on the merits. The Examiner is also asked to initial and return a copy of the PTO-1449 form to evidence such consideration.

I hereby certify that this correspondence is being
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Assistant Commissioner for Patents
Washington, D.C. 20231
101 21 200
on <u>Secender</u> 31, 2002
(Date of Deposit)
Stephen P. Gilbert
Name of applicant, assignee, or registered representative
Stephen P. Dilbert
July Miller
Signature
<u>December 31, 2002</u>
Date of Signature

Respectfully submitted,

Stephen P. Gilbert

Registration No. 27,893

BRYAN CAVE LLP 245 Park Avenue

New York, New York 10167-0034

phone: 212-692-1800 fax: 212-692-1900

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			July 9, 2001	1764						
TRAD	EMARK				U.S. PATENT DOCU	JMENTS				
Examiner Initial	Cite No.	U.S. Patent Document Number	Date	Name Class		Class	Subclass	Filing Date If Appropriate		
	<u></u>	5,633,424	5/27/97	Graves et al.			- 1 / Comm (mm			
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